South Dayton Dump and Landfill
Review Comments for the *OU1 Phase 1A Results and Proposed Sampling Locations Phase 1B and 2A*

General Comments

General Comment 1:
The *Final Work Plan for Operable Unit 1 (OU1) Groundwater and Data Gap Investigation - Phase 1A* (Conestoga Rovers [CRA], May 10, 2013) uses Soil Screening Levels (SSLs) for Groundwater Protection as justification for collecting additional soil samples. However, the soil sample results in the September 20th summary from CRA appear to be compared only to the residential and industrial regional screening levels (RSLs) and not the SSLs. If the purpose of the soil sampling is to evaluate possible sources of groundwater contamination through soil leaching, then it is not clear why the results were compared to residential/industrial RSLs.

General Comment 2:
It is difficult to evaluate the proposed Phase 1B and 2A sampling locations and depths as planned without updated hydrogeological information, e.g., new cross sections showing stratigraphy with soil and groundwater results. Please note that Section 2.0 states that "The new locations will be installed based on the results of the Phase 1A Groundwater Investigation and all existing data, including hydrostratigraphic and groundwater/surface water flow data."

Comment 1: page12, first full paragraph, last sentence: all proposed well screen lengths are 5 feet in length; however, the table does not distinguish between water table wells and deeper wells. Please clarify the purpose of each proposed well and the screen length for each. Additionally, the depths to water should be provided so that the proposed well screen lengths and depths can be evaluated.

Comment 2: page 12, Area 1: the vertical aquifer sampling (VAS) should be conducted before installing the shallow monitoring well northwest of MW-29 to verify that the highest concentrations of TCE are in the shallow portion of the aquifer.

Comment 3: page 13, Area 5: regarding the temporary well at BH69-13 – the well screen is proposed to be set at the depth interval of 23.5 to 28.5 feet bgs, which is presumably at or near the water table. Since TCE is a DNAPL, it is likely that shallow TCE NAPL would be residual rather than free phase. A deeper boring and/or temporary monitoring well should be installed to evaluate the presence of free phase DNAPL in the area. Same comment for Areas 6 and MW-210.

Comment 4: page 13, MW-210: a NAPL was identified in soil borings B03-13 and B05-13 at depths between approximately 40 and 55 feet bgs. Since this is presumably a DNAPL, has the stratigraphy of the B03-13 and B0-5-13 and surrounding borings been evaluated to identify if any confining layers are present? The DNAPL could perch on any such layers; therefore, this should be evaluated to ensure that the screen depth of the proposed temporary well is not too shallow to accumulate any free-phase DNAPL.

Comment 5: page 13, MW-210: Please clarify the statement "TCE in the upper aquifer zone in this area appears to be highly vertically stratified" as it appears that all three TCE exceedences occurred at the

same depth (29.5 – 33.5 ft bgs). Additionally, please provide supporting information (e.g., cross sections, boring logs) as also requested in General Comment 2.

Comment 6: page 14, TP-3: Given that TCE was detected at a concentration of 8,400 ug/kg in soil boring B90-13 at a depth of 26.5-28.5 feet bgs, VAS should be conducted at a location slightly downgradient of B90-13 to evaluate groundwater quality with respect to TCE in groundwater. Note that with a DAF of 10, the SSL for TCE (in the RSL tables) is 18 ug/kg, which is almost 3 orders of magnitude greater than the SSL.

Comment 7: page 14, first paragraph: where will the additional VAS be located on the Dayton Power and Light property?

Specific Area Comments

Area 1: Why is only one well proposed here and where exactly would it be located? Please clarify the purpose of the single well since it does not appear they can delineate a plume or find direction of contaminant flow with the proposed work. Similar comment for Area 3.

Area 4: It is not clear if CRA is, or needs to, further assess the ethylbenzene result of 260,000-ppb that is 10x the industrial soil level.

Area 6: NAPL was "identified" at BH88 and PCBs found in soil at BH67 that were 20x the industrial level. For the proposed temporary well at BH88, and any other proposed location with NAPL, need clarification on how exactly they will assess the NAPL (e.g. well construction, bail down tests, etc,). There is no mention of what will be done at BH67.

MW-210 Area: It is unclear what process or strategy CRA is using to study the direction of contaminant flow or to find a source area.

Overall

- CRA states that they exceed their GW to VI screening levels in many places but does not discuss what this means or if this will cause a response action.
- More details should be given on the proposed VAS locations (e.g. how deep, what sampling will be done, etc).
- There is no discussion on the qualitative Sudan IV results. As discussed during the field event, this test is not a "yes or no" indicator of the presence of free phase, mobile NAPL. As the field notes indicated differing levels of reaction, this should be discussed and assessed in more detail.